

A HIGH SPEED ASYNCHRONOUS AND PROGRAMMABLE STATE
MACHINE FOR GENERATING ALMOST FULL SYNCHRONOUS FLAGS
IN A SYNCHRONOUS FIFO.

5 ABSTRACT OF THE DISCLOSURE

10 A state machine comprising a first input receiving a first read clock, a
second input receiving a first write clock, a third input receiving a first
programmable Almost Full look-ahead signal, a fourth input receiving a second
read clock, a fifth input receiving a second write clock, and a sixth input
receiving a second programmable Almost Full look-ahead signal is disclosed.
The state machine manipulates the inputs to produce an output signal
representing an Almost Full output flag that is at a first logic state when a FIFO
is Almost Full and is at a second logic state when the FIFO is Not Almost Full.